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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,281	02/01/2002	Max Friedheim	1776-11	2057

7590 04/10/2007  
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EXAMINER
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PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/066,281

Applicant(s)

FRIEDHEIM, MAX

Examiner

Sang Y. Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 and 11-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedheim (US 5,471,556) or Friedheim (US 4,414,037) in view of Hutchinson (US 6,393,212).

Friedheim '556 or Friedheim '037 shows the vapor generator claimed including a vaporization chamber wherein the liquid upon its entry therein is instantaneously superheated, the volume of liquid is supplied by a pump which Friedheim '037 indicates as being a metered amount of liquid for a controlled stream of vapor at the desired pressure and pressure (see column 1, lines 37-42), the chamber having an interior surface with grooves or perforations, respectively. The grooves have the depth in the range of 0.030-0.050 inch. But, neither Friedheim '556 nor Friedheim '037 explicitly shows the control means to control the input liquid during the ongoing input of the liquid.

Hutchinson discloses a vapor generator having a vaporization chamber, the input port, the adjustable control means such as the control means (22) connected to the pump (20) for controlling the input liquid into the vaporization chamber to further control the pressure and volume of the output steam.

In view of Hutchinson, it would have been obvious to one of ordinary skill in the art to adapt Friedheim '556 or Friedheim '037 with the control means to adjustably control the pump

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to provide the desired metered amount of liquid to achieve the desired controlled superheated steam during the ongoing input of the liquid during the operating process.

3. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedheim '556 or Friedheim '037 in view of Hutchinson as applied to claims 1-8 and 11-27 above, and further in view of Berthoud (US 3,863,841).

Friedheim '556 or Friedheim '037 in view of Hutchinson discloses the vapor generator claimed except the output control means that can is adjustable to direct the vapor in a plurality of selected positions and the plurality of valves that are adjustable to direct the vapor in substantially perpendicular directions.

Berthoud shows a nozzle output control means that is adjustable to direct the output in a plurality of selected positions with a plurality of valves. In view of Berthoud, it would have been obvious to one of ordinary skill in the art to adapt Friedheim '556 or Friedheim '037, as modified by Hutchinson, with the output control means that is adjustable to direct the output steams in a plurality of selected positions so that the output steams may conveniently be directed in the desired directions of the user.

#### ***Response to Arguments***

4. Applicant's arguments filed 2/12/07 have been fully considered but they are not persuasive. The applicant's arguments have been fully considered along with the applicant's declarations. But they are not deemed persuasive in view of the prior art, especially under the Friedheim '037, wherein the controlled stream including the desired and sought but for the explicit adjustable control means. But such control means is taught to be within the level of ordinary skill in the art in view of Hutchinson.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y. Paik whose telephone number is 571-272-4783. The examiner can normally be reached on M-F (9:00-4:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Sang Y Paik  
Primary Examiner  
Art Unit 3742

syp